

3.5.2 GENERAL LAND SURVEY REQUIREMENTS AND ACQUISITION CONCEPTS

3.5.2.1 GREEN ACRES GUIDELINES FOR LAND SURVEYS

It is not sufficient that the plan of survey meets minimum standards for land surveys as defined by the State Board NJAC 13:5.1 et seq. State Board rules do not mandate that surveyors provide all of the information required for the acquisition of land in fee or easement with funding provided under the Green Acres Program.

3.5.2.2 SURVEY REPORT

The plan of survey is the survey report. The New Jersey Licensed Land Surveyor is responsible for preparing a plan of survey that serves to identify the results of the land survey and provides the basis for the preparation of a separate legal metes and bounds type Description of Property which shall not in any way be construed as modifying the apparent intention of the parties. Most special boundary or title situations found in the course of research or used as the basis of the survey may be explained in factual notes that are included on the plan of survey. Some special situations discovered in the course of conducting the survey may necessitate preparation of a separate factual letter for clarification.

If specified by the Using Agency in a site-specific engagement RFP, the New Jersey Licensed Land Surveyor shall prepare a separate Corner Marker Description Sheet for each property corner marker that has been set under the site-specific engagement award. The sheet shall include the Corner Number, physical description of mark set, project information, seller information, location of mark, and information regarding the firm or individual surveyor that set the marker. The sheet shall include a cap detail, a sketch showing proximity to field witness marks and a photograph of the mark that views the south side of the marker, looking northward. The Corner Marker Description Sheet may be in a form specified by the Using Agency.

3.5.2.3 NEW JERSEY MAP FILING LAW

Surveys prepared for the acquisition of land in fee or easement with funding provided under the Green Acres Program shall be presented to the county recording officer for filing on behalf of the Using Agency by the New Jersey Licensed Land Surveyor within 30 days of notification by Using Agency that the property has been acquired. Since all surveying, mapping, and certification requirements of the Green Acres Guidelines for Land Surveys are substantially in accordance with the New Jersey Map Filing Law NJSA 46:23-9.9), only the surveyor's certification and certification by the municipal clerk relative to planning board or zoning board views or approvals shall be required pursuant to the New Jersey Map Filing Law, unless this requirement is waived or modified by the Using Agency.

3.5.2.4 DEGREE OF CARE

Special care must be taken to insure accuracy, consistency, and clarity in all documents being prepared, since Green Acres participation and resultant restrictions insures that lands are retired from development pressure and the land survey plan and corresponding metes and bounds description will likely be the last ones prepared or recorded for that parcel. The Surveyor's Statute of Limitations does not apply to survey work prepared for governmental agencies.

3.5.2.5 MUNICIPAL TAX LOTS

The Detail Sheet supplied with the site-specific RFP will indicate the municipal tax block and lots to be surveyed. A copy from a tax map indicating the area and lots to be surveyed may also be supplied. From this information, the surveyor is required to obtain recorded deeds and other evidence to conduct the survey. The surveyor shall maintain the integrity of the municipal tax lots. Internal lot lines and individual areas per lot shall be stated on the plan, and individual lot area shall be restated in the metes and bounds description. If the site-specific RFP dictates the acquisition of a portion of a tax lot, no attempt shall be made by the surveyor to assign new lot numbers to remaining lands, unless this provision is modified by the Using Agency.

3.5.2.6 SURVEY TO FOLLOW DEED LINES

The lines of the survey are to run with the lines indicated in the deeds of the chain of title for the subject property. Survey lines for lots created by a filed map extend to centerlines of paper streets. When no metes and bounds deed description for the subject property exists, the survey may be conducted from adjoining deed information and the plan must be annotated, "SURVEYED AS IN POSSESSION FROM ADJOINING RECORD DEEDS". The entire lot shall be surveyed and described by metes and bounds. Any lands to remain to the grantor become an exception to the description of the entire lot. The total area as surveyed is then also subject to other existing conditions, such as paramount public rights in road rights-of-way, public rights in rivers or claims of the State of New Jersey in tidelands as shown on public claims maps, or private access or utility easements found in the course of preparing the survey.

3.5.2.7 PUBLIC ROAD RIGHTS-OF-WAY AND RIVERS

The principles of dedication of land for road purposes shall be considered by the surveyor. The survey lines and corresponding metes and bounds description are to run with the lines of the deed description as written in the record unless the site-specific engagement request directs some other course of action. If the fee title extends to the center of a public road or river, the survey lines shall run to the center of the public road or river.

The property will be acquired in fee, SUBJECT TO THE PARAMOUNT RIGHTS OF THE PUBLIC, with area(s) of those public rights stated. For areas of easement to be obtained, the area of easement shall not extend into public road rights-of-way, but shall extend into the river or watercourse. The survey must also provide the bearings and distances of the road right-of-way sidelines, as well as the area within the public right-of-way. If there has been no dedication information found or the tax map (which is a document of last resort) does not define the width for the sidelines of the right-of-way, the area of the right-of-way is defined as the area of the paved or traveled portion of the road bed. The survey must indicate recording information for maps, deed book number and page number, or other pertinent information regarding the dedication of public ways. The area in a public road right-of-way or a navigable river is subject to the paramount rights of the public and also possible private rights. The area of each shall be stated on both the plan and in the description, and is deducted from any net area stated for the lot.

3.5.2.8 PRIVATE RIGHTS-OF-WAY AND EASEMENTS

Private rights-of-way and easements for roads crossing the parcel being surveyed must also be shown with record or physical width provided. If record information exists regarding the creation and dimensions of private rights in the project area, that information is to be provided. Only if no record data as to location and width exists shall the physical location and width of the use by any individual or entity other than the record owner suffice. The survey must indicate recording information for maps, deed book and page number, or other pertinent information regarding the creation of the private easements. Calculation of the area of private easements is not required on the plan or in the description. The new metes and bound description may generally refer to the easement rights in a qualifying clause, i.e. SUBJECT TO, without actually describing the easement by metes and bounds.

3.5.2.9 DEED CONFLICTS

The New Jersey Licensed Land Surveyor is responsible for obtaining all records, measurements and evidence to prepare a correct and accurate land survey, and shall present information on the plan of survey to show how the record condition now exists or fits on the ground. As a result of this research, the surveyor may uncover areas of title uncertainty such as a gore area between deeds, deed overlaps, or other areas of ambiguity. To demonstrate that adjoining records have been examined, the plan of survey must indicate information for all adjoiners, including the name of the record owner, the municipal tax block and lot, and the deed book and page number for adjoining parcels. The New Jersey Licensed Land Surveyor may be able to render a professional opinion as to how a deed problem was created. Conflicts with adjoining deeds that are not resolved in the process of boundary analysis by the surveyor must be shown as deed overlaps or

deed gores on the plan of survey. Descriptions prepared by the New Jersey Licensed Land Surveyor may enable the Using Agency to correct the records and clear title to land.

3.5.2.9.1 RECORD GORE AREAS

A gore between adjoining deeds may be the result of a true VACANCY dating back to a conveyance out of the Board of Proprietors of Eastern or Western Divisions of New Jersey. Deed gores are to be defined by bearings, distances, and area, both on the survey plan and in a separate metes and bounds description, with references to tax lot and block numbers. A separate metes and bounds description of the gore area with appropriate copies shall be prepared in every case to provide the Using Agency the opportunity to obtain a quit claim deed to the gore area from the Board of Proprietors or the sellers and the adjoiners as appropriate. The gore area shall be drawn on all survey plans of lots being surveyed. This description shall agree with the results of the survey plan to which it refers in every particular, and for that reason, the description must not include any information that does not appear either graphically or in a factual note on the survey plan. A reduced copy of the survey plan (8-1/2" by 11") must also be attached to each copy of the description.

3.5.2.9.2 RECORD OVERLAP AREAS

Areas of deed description overlaps are to be defined by mathematical survey expressions and area, both on the survey plan and following a qualifying clause in the metes and bounds description of the property, with references to tax lot and block numbers stated. The overlap area shall be drawn on all adjoining survey plans of lots being surveyed. The overall metes and bounds description of a property shall agree with the results of the survey plan to which it refers in every particular, and the overlap area shall be described by metes and bounds following a qualifying clause (i.e. SUBJECT TO AN OVERLAP...). The area of overlap shall also be stated for each Tax Block and lot, so that the net area of each surveyed lot is known and stated both on the plan and in the corresponding metes and bounds description. The description must not include any information that does not appear either graphically or in a factual note on the survey plan. A reduced copy of the survey plan (8-1/2" by 11") must also be attached to each copy of the description.

3.5.2.10 CORNER MARKING AND LINE MARKING

Pursuant to rules of the New Jersey State Board of Professional Engineers and Land Surveyors, the New Jersey Licensed Land Surveyor is responsible for determining the Ultimate User of the survey, the survey plan, and the corresponding description. The Ultimate User shall be considered to be the Using Agency and the State of New Jersey. To clearly define where corner markers must be set and where they may be omitted, the following sub-sections of this RFP shall apply.

3.5.2.10.1 SETTING CORNER MARKERS

Corner markers shall be set at the perimeter limits of a fee simple project area where the property being surveyed adjoins private lands not owned in fee by the Using Agency or not being acquired in fee as a part of the same project. Corner markers shall also be set at the perimeter limits of all public access easement corridors except where the public access easement corridor adjoins lands owned in fee by the Using Agency or is being acquired in fee as a part of the project. Corner markers shall also be set at the perimeter limits of all conservation easements. Corner markers shall be set at the intersection of a public road right-of-way line with a perimeter limit line of the project. These provisions shall apply to both fee acquisition and easement area acquisitions. Internal lines within a lot marking a public access easement corridor limit shall be marked under the same guidelines as a fee acquisition. Corners of exception areas shall also be marked. Corner markers for such residential exception areas that fall in a tilled field shall, in addition to having a surface marker set, have a detectable subsurface marker set not less than 1.5 feet below the surface. The requirement to mark corners may be clarified or modified by the Using Agency in a site-specific RFP.

3.5.2.10.2 OMITTING MARKERS

Corner markers shall be omitted where the corners are within the right-of-way or along the right-of-way line of a public road (except at the intersection of the right-of-way line with a perimeter limit line of the project, common with a private adjoiner). Corner markers may also be omitted where such corners are common with other lands owned by the Using Agency, the corners are within the project area limits (i.e. internal tax lot corners), the corners are common with other lands being acquired as part of the overall project area being surveyed, or where the corners fall within a waterway, water impoundment, or vertical escarpment, unless, in the professional judgment of the surveyor, the corners should be set. Corner markers that are omitted must be identified on the plan as omitted by contractual agreement using the language required by the State Board of Professional Engineers and Land Surveyors. (See NJAC 13:40-5.1/d).

3.5.2.10.3 FOUND MARKERS

In instances where a corner marker would otherwise be set but during the course of conducting the survey, a corner marker is found in the field to be within a radius of 1.5 feet of the true corner as calculated by the surveyor, such corner shall be considered as marked. No new corner marker shall be set, except if this corner is the only alternative for use as the description point of beginning. The plan of survey shall clearly indicate the relationship of the found marker to the true calculated corner per the surveyor's calculations. Such relationship shall be shown graphically on the plan by north or south and east or west offset distances from the true corner and in a corner detail, if necessary for clarification. Provide the size, type and description of the marker, including cap color and identity. If a marker is found on a corner for which a monument is specified to be set, the surveyor may set the monument as a line marker, set the monument on an alternate corner, or reduce the fee for the site-specific engagement if no new monument is set.

3.5.2.10.4 OFFSET MARKERS

At the time of the survey, any marker that cannot be set because the location of the corner is inaccessible must be set on an offset. The marker must be set on the property line as near to the corner as is practical. The disk or cap shall be stamped OFFSET and the actual distance in US Survey Feet to the corner shall be clearly indicated on the plan, stated to two decimal places.

3.5.2.10.5 PUBLIC ACCESS CORNER MARKERS

Corner markers shall be set to physically identify the location of all public access trail corridors whether such corridors are being acquired in fee or by easement interest, unless this requirement is specifically waived or modified by the Using Agency in a site-specific engagement RFP. All such corridors shall be marked on both sidelines at each angle point and where the corridor sidelines intersect a public road right-of-way or the subject property boundary.

3.5.2.10.6 THREE MONUMENT MINIMUM

To maintain the coordinate system for potential future surveys or re-surveys, the surveyor must set a minimum of three monuments for corner markers, visible from one to another if at all possible, at each grouping of contiguous parcels in a project area. One monument is to be selected as a description point of beginning, for which the NJPCS Northing and Easting values must be stated. If the corner selected to be the Description Point of Beginning was found previously marked, then a monument must be set on an alternate corner to maintain the three monument minimum requirement. If all original corner markers are found undisturbed, line markers shall be added as accessories to those corners to fulfill the requirement for three new monuments. If original undisturbed corner markers consist of pins within 1.5 feet of the record location, these may be replaced by one of the three required monuments or shored up in place with concrete, but the final report and survey must specify what was replaced or changed.

3.5.2.10.7 CAP DETAIL

To indicate the casting and stamping of each type of cap, disk, shiner, etc. actually set to mark corners, a detailed enlargement, not necessarily drawn to scale, shall be depicted on the survey plan. Each corner marker set in the field shall bear the name of the survey firm and shall be stamped with the year set and the corner number.

3.5.2.10.8 ACCEPTABLE CORNER MARKERS

All corner markers shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk that bears the name of the survey firm and shall be stamped with the year set and the corner number.

Corner markers shall generally be set flush with the ground except in rural, unimproved areas where the top of the marker may extend not more than 0.2 foot above the ground surface. The Using Agency reserves the right to specify the cap design and marker type or to supply corner markers or monuments in a site-specific engagement RFP.

3.5.2.10.8.1 DISKS

Disks may be used for corner markers if the calculated survey corner falls on a large boulder or on poured concrete slabs, curbs, bridges, or walls. Each disk shall be a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk set and cemented in a drill hole. The disk may be of such other materials or design approved by the Using Agency for the site-specific engagement.

3.5.2.10.8.2 MONUMENTS

All monuments set shall be one of two types: pre-cast or poured in place and set flush, but not more than 0.2 foot above the ground surface. Monuments shall be constructed of reinforced concrete, detectable with a ferrous or magnetic locator, not less than 4 inches square on top, not less than 4 inches square on the bottom, not less than 30 inches in length, and displaying a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk. Monuments may be prefabricated of other materials or design if pre-approved by the Using Agency for the site-specific engagement.

3.5.2.10.8.3 SUBSURFACE MARKERS

Corner markers for a residential exception area to an easement acquisition that fall in a tilled field shall, in addition to having a surface marker set, have a ferrous or other metal detectable subsurface marker set not less than 1.5 feet below the surface. The requirement to set subsurface markers or mark these corners may be clarified or modified by the Using Agency in a site-specific RFP or by mutual agreement of the Using Agency and the New Jersey Licensed Land Surveyor at the time of the survey.

3.5.2.10.8.4 REBAR

All other corner markers other than disks or monuments shall consist of minimum 1/2 inch diameter rebar pins, driven to a point of refusal but shall not less than 24 inches in length. Larger diameters or longer lengths may be necessary to deter vandalism or removal. All rebar pins when set shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk. Plastic caps are not acceptable for marking corners. Corner markers shall generally be set flush with the ground except in rural, unimproved areas where the top of the marker may extend not more than 0.2 foot above the ground surface. The Using Agency reserves the right to specify the cap design and marker type or to supply corner markers or monuments in a site-specific engagement RFP.

3.5.2.10.9 FLAGGING CORNERS

For each corner marker that is found or set in the field, a witness lath shall be placed within the surveyed property not more than 2 feet from the marker. To aid the Using Agency with identification and recovery of corner markers, the lath shall extend above the ground by 2 feet, labeled with the corner number, and three bands of orange surveyor's flagging shall

be attached to the lath. This requirement for lath and flagging shall also apply to markers set on an offset to corner or pins set on line except that only one band of flagging is required. This does not apply to random traverse points set in the field, and it is recommended that an alternate flagging color be selected for each purpose. It is strongly recommended that the colors of each type of flagging used for each purpose be communicated to the administering division contact person.

3.5.2.10.10 SETTING LINE MARKERS

In addition to corner markers, line markers shall be set when the perimeter of a project area being surveyed and acquired in fee simple or as a public access corridor adjoins private lands not owned by the Using Agency in fee or as part of a public access corridor easement. Line markers may be omitted when the adjoining land is being acquired by the Using Agency as a part of the same project. Line markers must be set when the adjoining land is owned by an agency other than the Using Agency. These provisions shall apply to both fee acquisitions and easement with public access area acquisitions. Additionally, public access easement corridors shall be marked under the same guidelines as a fee acquisition. Line markers shall be set at approximately 250 feet to 300 feet intervals to aid the administering divisions in identifying and locating long property lines in excess of 500 feet between corner markers. Only long lines for which corner markers must be set shall be further marked in this manner. The distances between line markers shall be noted on the plan of survey, stated as a horizontal distance in US Survey Feet to two decimal places. This requirement to set line markers may be modified or waived by the Using Agency in a site-specific RFP.

3.5.2.10.11 OMITTING LINE MARKERS

Line markers shall be omitted where the line is within or along the right-of-way line of a public road, or where the line falls within a waterway, water impoundment, or vertical escarpment. Individual line markers may be omitted when the line runs along a physical wall, a fence, or other physical feature, provided that the physical feature is identifiable in the field and the distance to the line can be clearly identified on the plan of survey. Line markers may also be omitted along lines that are common with other lands owned by the Using Agency in fee simple or as a public access easement, or lands being acquired by the Using Agency as part of the overall project area being surveyed. The New Jersey Licensed Land Surveyor may omit line markers on lines that are internal to the perimeter of the survey lines or when this requirement is modified by the Using Agency in a site-specific RFP.

3.5.2.10.12 ACCEPTABLE LINE MARKERS

3.5.2.10.12.1 REBAR

When used for marking the line, rebar shall consist of minimum 1/2 inch diameter rebar pins, driven to the point of refusal, but shall not less than 24 inches in length. Larger diameters or longer lengths may be necessary to deter vandalism or removal. All rebar pins when set shall contain a standard 3-1/2 inch or 2-1/2 inch bronze or aluminum disk or a plastic cap, any of which are acceptable for line markers when marked with the surveyor's identification. However, plastic caps on rebar are not acceptable for marking corners and not acceptable for marking offsets to inaccessible corners.

3.5.2.10.12.2 DURABLE FIBERGLASS POST

When a pin and cap are not practical to mark the line, such as through a field or marsh, the perimeter lines may be marked by setting durable orange or white fiberglass posts, Carsonite or similar material, six (6) feet in length. If fiberglass posts are set, the flattest side of the post shall face away from the property being surveyed, to allow for the attachment of signage.

3.5.2.10.13 FLAGGING LINE MARKERS

For each line marker that is set (or found in the field within 1.5 feet of line), a witness lath shall be placed within the surveyed property not more than 2 feet from the marker. To aid the Using Agency with identification and recovery of corner markers, the lath shall extend above the ground by 2 feet, be labeled as line marker, and one band of orange surveyors flagging shall be attached to the lath. This does not apply to random traverse points set in the field, and it is recommended that an alternate flagging color be selected for that purpose.

3.5.2.11 ORIGINAL SIGNATURE AND SEAL

All original type mylars and all paper copies of full size survey plans (not reduced plans) and all metes and bounds descriptions shall be signed and sealed by the New Jersey Licensed Professional Land Surveyor who is responsible for the preparation of the field survey, the survey plan, and the metes and bounds descriptions. To assure that the products are those of the licensee, the signature must be handwritten in ink on each original and paper copy of the plan of survey and on each metes and bounds description. Rubber stamp signatures or computer-generated signatures are unacceptable.